

Remarks

The specification at pages 2, 17 has been amended. Claims 17 and 21 have been amended with the details set forth in Attachment I (Version with Markings to Show Changes Made). Page 16 of the specification was omitted and page 17 has been renumbered as page 16. Claims 1-9 have been cancelled.

Restriction Requirement

A restriction was made between Claims 1-9 (Group I) and Claims 10-21 (Group II). This confirms the election of the Group II, Claims 10-21. Non-elected Claims 1-9 have been cancelled without prejudice to the filing of a divisional application covering the method of these claims.

Specification Objection

The Serial No. of the application referenced on page 2 has been added and in the numbering of the pages, page 16 was omitted, and page 17 has been changed to read page 16 -- .

The 35 USC 112 Rejection

Claims 15, 17 and 21 are rejected under 35 USC 112, second paragraph, as being indefinite. Regarding Claim 15, the functional statement for the "means" is set forth in parent Claim 10. Claims 17 and 21 have been amended to overcome the objections.

The 35 USC 102 Rejections

Claims 10, 12, 16 and 21 are rejected under 35 USC 102(b) as anticipated by each of Kipling *et al*, Stetter *et al*, Clerc, Taylor *et al*, WO 98/19153, and WO 97/21094. Claim 10, for example, sets forth:

“an apparatus for determining the trapping of pathogen by antibodies deposited in a fluidic channel”, comprising:

1. “a fluidic channel have at least one pair of spaced electrodes therein”;
2. “antibodies located on said spaced electrodes”;
3. “means for producing an electric field across said spaced electrodes”,
and
4. “an impedance sensor for measuring impedance between said spaced electrodes”.

Applicants are unable to find a teaching in each of the six (6) references of the four (4) features of Claim 1, as set forth above. Similarly, each of the specifically claimed features of independent Claim 15 are not found in these references. Where in each of these references is there taught that “said at least one pair of spaced electrodes is located on a surface of said fluidic channel” (Claim 12), or that the “at least one pair of spaced electrodes is formed within the fluidic channel?” Since 35 USC 102 requires each claimed feature be taught in the reference applied, the Examiner is called upon to specifically identify where each claimed feature is taught in each reference, or withdraw these rejections.

Claims 13, 15, 17-19, 14 are also rejected under 35 USC 102 as anticipated by at least on the above-referenced references. No teaching is found in any of these references of “a plurality of adjacent pairs of spaced electrodes” (Claim 13); “an interdigitated electrode” (Claims 17-18); and the “reference electrodes” as set forth in Claim 19. Thus, these applied references fail to teach each claimed feature as required to support a rejection under 35 USC 102, and these rejections should be withdrawn.

The 35 USC 103 Rejection

Claim 20 is rejected under 35 USC 103(a) as unpatentable over each of Taylor *et al*, WO 98/19153, and WO 97/21094. Claim 20 depends from Claim 16 and includes all the structural features of the parent claim. As pointed out above, each of these references fail to teach the features of parent Claim 16. The Examiner admits that these references fail to teach the features of Claim 20, but contends that such are obvious. If such "means for measuring impedance" is obvious as contented by the Examiner, such should be taught in the prior art, and thus the Examiner should cited prior art which teaches the features as set forth in Claim 20, or withdraw this ground of rejection.

Conclusion

Since the prior art cited by the Examiner fails to teach the features of Claims 10-21, and thus fails to support a rejection under 35 USC 102 or 35 USC 103. Non-elected Claims 1-9 have been cancelled. Thus, this application is in condition for allowance based on Claims 10-21.

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Respectfully submitted,

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Attachment I
S.N. 09/737,542
Version with Markings to Show Changes Made

In the Specification:

Paragraph bridging pages 1 and 2 (page 1, line 16 to line 9, page 2), amend to read as follows:

--One typical method of detecting pathogens is to detect whether or not they attach to specific antibodies. The antibodies are typically fluorescently labeled and this increase in fluorescence is detected optically. Multiple pathogen detection has been accomplished by immobilizing antibodies on a surface, and then introducing pathogens in a fluid to the surface. The pathogen binds to the surface and then are detected by optical means.

Recently, impedance measurements across adjacent electrodes has been utilized to detect the presence of trapped pathogens, and such an approach has been described and claimed in co-pending application Serial No. 09/738,927 [(IL-10404)], filed December 13, 2000, entitled "Using Impedance Measurements For Detecting Pathogens Trapped In An Electric Field", assigned to the same assignee. - -

Page "17", changed to read --16--.

In The Claims:

Claims 1-9 have been cancelled.

Claim 17, amend to read as follows:

17. (Amended) The sensor of Claim 16, wherein said spaced electrodes comprise fingers of an interdigitated electrode formed [forming] on said surface of said microchannel.

Claim 21, amend to read as follows:

21. (Amended) The sensor of Claim 1, wherein the at least one pair of spaced electrodes is formed within the fluidic channel.